APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/676,924	10/02/2000	Shy Cohen	13768.604.7	3782

7590   06/20/2006

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EXAMINER
NGUYEN, HAI V

ART UNIT	PAPER NUMBER
2142	

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/676,924	COHEN, SHY
	Examiner	Art Unit	
	Hai V. Nguyen	2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>03</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 April 2006</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4,6,8-13,15-20,22 and 23* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 2, 4, 6, 8-13, 15-20, 22 and 23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This Office Action is in response to the communication received on 03 April 2006.

2.   Claims 3, 5, 7, 14, 21 were cancelled.

3.   Claims 1, 2, 4, 6, 8-13, 15-20, 22 and 23 are presented for examination.

Response to Arguments

4.   Applicant's arguments with respect to claims 1, 13 have been considered but are

moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

6.   Claims 1, 13, 20 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

7.   Regarding claims 1, 13, 20, Applicant points out that the amended limitations of

claim 1 of "wherein the second parked HTTP-based "request" includes therein a request

that the second processor transmits a reply after the expiration of the a time period even

if there are no messages to send to the first processor in order to ensure persistent

connectivity between the first and second processor" "wherein the second parked

HTTP-based "request" includes therein a request that the second processor transmits a

reply after the expiration of the a time period even if there are no messages to send to

the first processor in order to ensure persistent connectivity between the first and

second processor", of claim 13 of "allowing the client to include the connection time out

period in a parked HTTP-based "request" sent from the client to be parked at the server for requesting a HTTP-based "reply" from the server after expiration of the connection time out period even if there are no messages to send to the client in order to avoid connection termination by the proxy server due to communication inactivity" , and of claim 20 of "wherein the HTTP-based "request" includes a first connection time out period used in order to determine a time duration in which the client is to receive a "reply" message in order to ensure persistent connectivity between the client and a server" are described in the specification in which it describes that, "the client generated "request" that is sent to and parked at the server may include a request that the server send a reply after a period of time. This will ensure that the client's proxy server 200 will not time out and close the connection due to inactivity on the channel" (1st paragraphs in pages 18, 20 as shown by Applicant in the remarks on page 12). However, the specification describing that, "the client generated "request" that is sent to and parked at the server may include a request that the server send a reply after a period of time" is not the same or read into as claimed in claims 1, 13, and 20 as shown above.

8.   Regarding claim 20, the phrase "unless a message is generated that needs to be transmitted to the client or unless the first (second) connection time out period expires" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "A or B"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

10.   Claims 1, 2, 4, 6, 8-13, 15-20, 22 and 23 are rejected under 35 U.S.C. 103(a) as

being unpatentable over **Gupta** US patent # **6,212,565** in view of **Smith** et al. US Patent

Application Publication # **2002/0016839 A1**.

11.   As to claim 1, Gupta discloses the method comprising:

transmitting a first HTTP-based "request" from the first processor *(Fig. 3, client*

302) to the second processor *(Fig. 3, server 306)* for establishing a first communication

channel between the first processor and the second processor through the proxy server

(Fig. 3, proxy 304) to allow the transfer of first messages from the first processor to the

second processor, and the delivery of first message delivery acknowledgments from the

second processor to the first processor *(Gupta, Fig. 3, col. 3, lines 13-65; col. 6, lines 4-*

63);

However, Gupta does not explicitly disclose transmitting a fist parked HTTP-

based "request" from the first processor to be parked at the second processor for

establishing a persistent communication channel between the first processor and the

second processor through the proxy server to allow the transfer of second messages

from the second processor to the first processor, and the delivery of second message

delivery acknowledges from the first processor to the second processor, and wherein

the first HTTP-based "request" includes therein a request that the second processor

transmits a reply after the expiration of the a time period even if there are no messages

to send to the first processor so that the first processor can assess a status of the

connection thereto.

In the same field of endeavor, Smith discloses transmitting a fist parked HTTP-

based "request" from the first processor to be parked at the second processor for

establishing a persistent communication channel between the first processor and the

second processor through the proxy server to allow the transfer of second messages

from the second processor to the first processor, and the delivery of second message

delivery acknowledges from the first processor to the second processor, and wherein

the first HTTP-based "request" includes therein a request that the second processor

transmits a reply after the expiration of the a time period *(periodic intervals)* even if there

are no messages to send to the first processor so that the first processor can assess a

status of the connection thereto *(Smith, paragraphs [0107]-[0108]; [0114]-[0116])*.

Accordingly, it would have been obvious to one of ordinary skill in the networking

art at the time the invention was made to have incorporated Smith's teachings of the

heartbeat messages with the teachings of Gupta, for the purpose of *ensuring the given*

channel remain valid and avoiding any problems before they could happen (Smith,

paragraph [0116]).

Gupta-Smith discloses receiving a first HTTP-based "reply" *(heartbeat message)* from the second processor to the first processor in response to the first parked HTTP-based "request" *(Smith, paragraphs [0107]-[0108]; [0114]-[0116])*;

Gupta-Smith discloses in response to receiving the first HTTP-based "reply", transmitting a second parked HTTP-based "request" via the proxy server to the second processor, the second parked HTTP-based "request" including an acknowledgment to the first HTTP-based "reply" in order to maintain the persistent HTTP connection between the first processor and the second processor through the proxy server, and wherein the second parked HTTP-based "request" includes therein a request that the second processor transmits a reply after the expiration of the a time period even if there are no messages to send to the first processor in order to ensure persistent connectivity between the first and second processor *(Smith, paragraphs [0107]-[0108]; [0114]-[0116])*.

The heart of the claimed invention is providing the system that periodically retransmits the HTTP request to ensure that the server has a parked request to which it may respond whenever messages are generated therein. The time interval for these retransmissions may be established as desired to provide the persistent connection in case of the timeout period is expired. Smith invention exactly was directed to the same purpose, i.e., to provide a virtual persistent connection using the HTTP tunneling transport and the timing parameters for the client's session that can be adjustable in an attempt to avoid problems in the future, e.g., by closing a current channel and open a new one before the interference by the firewall proxy *(Smith, paragraph [0116])*.

12.   As to claim 2, Gupta-Smith discloses, wherein the first HTTP-based "request" includes at least one of the first messages therein *(Smith, paragraphs [0107]-[0108]; [0114]-[0116])*.

13.   As to claim 4, Gupta-Smith discloses wherein the at least one of the first or second HTTP-based "replies" includes at least one of the second messages therein *(Smith, paragraphs [0107]-[0108]; [0114]-[0116])*.

14.   As to claim 6, Gupta-Smith discloses, wherein the first processor only receives the first HTTP-based "reply" from the second processor on the persistent communication channel when the second processor has at least one of the second messages to send to the first processor *(Smith, paragraphs [0107]-[0108]; [0114]-[0116])*.

15.   As to claim 8, Gupta-Smith discloses, setting the time period to be less than two days *(Smith, the time period can be adjusted by the system or the user, paragraphs [0107]-[0108]; [0114]-[0116])*.

16.   As to claim 9, Gupta-Smith discloses setting the time period to be approximately five minutes *(Smith, the time period can be adjusted by the system or the user, paragraphs [0107]-[0108]; [0114]-[0116])*.

17.   As to claim 10, Gupta-Smith discloses, comprising dynamically adjusting the time period based upon a connection time out closure controlled by the proxy server *(Smith, the time period can be adjusted by the system or the user, paragraphs [0107]-[0108]; [0114]-[0116])*.

18. As to claim 11, Gupta-Smith discloses, wherein the dynamically adjusting of the time period comprises: receiving a connection time out closure message from the proxy server; determining a first time between transmitting the second HTTP-based "request" and receiving a connection time out closure message from the proxy server; and calculating a new time period to be less than the first time and less than the time period *(Smith, the time period can be adjusted by the system or the user, paragraphs [0107]-[0108]; [0114]-[0116])*.

19. Claim 12 corresponds to the computer readable medium claim of claim 1; therefore it rejected under the same rationale as claim 1.

20. As to claim 13, Gupta-Smith discloses a method of enabling transmission of unsolicited messages from a server to a client by ensuring that a persistent connection between the server and the client does not time out, wherein the client resides on the private network having a proxy server between the private computer network and a public network, and wherein the server transmitting the unsolicited messages over the public computer network, the method comprising:

selecting by a client a connection time out period *(Gupta, Time-to-Live, TTL)* used in order to determine a time duration in which the client is to receive a "reply" message from a server in order to ensure persistent connectivity between the client and the server *(Gupta, Fig. 3, col. 3, lines 13-65; col. 6, lines 4-63)*;

allowing the client to include the connection time out period in a parked HTTP-based "request" sent from the client to be parked at the server for requesting a HTTP-based "reply" from the server after expiration of the connection time out period even if

there are no messages to send to the client in order to avoid connection termination by

the proxy server due to communication inactivity *(Smith, paragraphs [0107]-[0108];*

[0114]-[0116]); and

transmitting the parked HTTP-based "request" to the server via the proxy server

to open a persistent connection therewith *(Smith, paragraphs [0107]-[0108]; [0114]-*

[0116]).

21.   As to claim 15, Gupta-Smith discloses dynamically adjusting the time period

based upon a connection time out closure controlled by the proxy server due to the

communication inactivity *(Smith, paragraphs [0107]-[0108]; [0114]-[0116])*.

22.   As to claim 16, Gupta-Smith discloses receiving a connection time out closure

message from the proxy server *(Smith, paragraphs [0107]-[0108]; [0114]-[0116])*; upon

receiving the time out closure message from the proxy, calculating a new time period

from the transmitting of the HTTP-based request to the receiving of the connection time

out closure message *(Smith, paragraphs [0107]-[0108]; [0114]-[0116])*; reducing the

connection time out period to be less than the new time period and less than a current

value of the connection time out period in order to create a new connection time out

period *(Smith, paragraphs [0107]-[0108]; [0114]-[0116])*; including the new connection

time out period in a second parked HTTP-based "request" requesting a HTTP-based

"reply" from the server after the expiration of the new connection time out period even if

there are no messages to send to the client in order to avoid connection termination by

the proxy due to communication inactivity *(Smith, paragraphs [0107]-[0108]; [0114]-*

[0116]); and transmitting the second parked HTTP-based "request" to the server via the

proxy server to maintain the persistent connection therewith *(Smith, paragraphs [0107]-*
[0108]; [0114]-[0116]).

23.   As to claim 17, Gupta-Smith discloses receiving a connection time out closure
message from the proxy server indicating that the proxy server has closed the
persistent connection; calculating a new time period from the transmitting of the HTTP-
based request to the receiving of the connection time out closure message; and
transmitting an HTTP-based request to the server via the proxy server to open a
persistent connection therewith, the HTTP-based request requesting a reply from the
server when the server has messages to send to the client and after the expiration of
the connection time out period if there are no messages to send to the client *(Smith,*
paragraphs [0107]-[0108]; [0114]-[0116]).

24.   As to claim 18, Gupta-Smith discloses receiving a connection time out closure
message from the proxy server; reducing the connection time out period to form a new
connection time out period shorter in duration than the connection time out period; and
transmitting a third parked HTTP-based "request" to the server via the proxy server to
open a persistent connection therewith, the third parked HTTP-based "request"
requesting a reply from the server when the server has messages to send to the client
and after the expiration of the new connection time out period if there are no messages
to send to the client *(Smith, paragraphs [0107]-[0108]; [0114]-[0116])*.

25.   Claim 19 corresponds to the computer readable medium claim of claim 13;
therefore it rejected under the same rationale as claim 13.

26.   As to claim 20, Gupta-Smith discloses a method of transmitting unsolicited

messages via a public computer network to a client residing on a private computer

network, the private computer network including a proxy server, the method comprising:

receiving an HTTP-based "request" originating from the client through the proxy server,

wherein the HTTP-based "request" includes a first connection time out period used in

order to determine a time duration in which the client is to receive a "reply" message in

order to ensure persistent connectivity between the client and a server *(Gupta, Fig. 3;*

Smith, paragraphs [0107]-[0108]; [0114]-[0116]); and

parking the HTTP-based "request" without responding thereto unless the first

connection time pot period expires, the parking of the HTTP-based "request"

establishing a persistent connection from the client through the proxy server *(Smith,*

paragraphs [0107]-[0108]; [0114]-[0116]); and

when the first connection time out period expires, generating an HTTP-based reply to

the HTTP-based request parked for the client, the HTTP-based "reply" containing the

message therein *(Smith, paragraphs [0107]-[0108]; [0114]-[0116])*; and

transmitting the HTTP-based "reply" *(Smith, paragraphs [0107]-[0108]; [0114]-[0116])*.

receiving a second HTTP-based request including a message acknowledgement from

the client through the proxy server acknowledging the receipt of the HTTP-based "reply"

and also including a second connection time out period *(Smith, paragraphs [0107]-*

[0108]; [0114]-[0116]); and

parking the second HTTP-based request without thereto unless the second connection

time out period expires, the parking the second HTTP-based request maintaining the

persistent connection from the client through the proxy server *(Smith, paragraphs*
[0107]-[0108]; [0114]-[0116]).

27.   As to claim 22, Gupta-Smith discloses wherein the second connection time out
period is different than the first connection time out period *(Smith, paragraphs [0107]-*
[0108]; [0114]-[0116]).

28.   Claim 23 corresponds to the computer readable medium claim of claim 20;
therefore it rejected under the same rationale as claim 20.

29.   Further references of interest are cited on Form PTO-892, which is an
attachment to this action.

Conclusion

30.   Applicant's amendment necessitated the new ground(s) of rejection presented in
this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP
§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37
CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE
MONTHS from the mailing date of this action. In the event a first reply is filed within
TWO MONTHS of the mailing date of this final action and the advisory action is not
mailed until after the end of the THREE-MONTH shortened statutory period, then the
shortened statutory period will expire on the date the advisory action is mailed, and any
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai V. Nguyen whose telephone number is 571-272-3901. The examiner can normally be reached on 6:00-3:30 Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hai V. Nguyen
Examiner
Art Unit 2142